

Amendments to the Claims:

This listing of claims will replace all prior versions, and listings of claims in the application:

Listing of Claims:

- 1-6. (Canceled)
7. (Previously presented) A mucosal adjuvant for inducing both vaccine antigen-specific antibody in blood and vaccine antigen-specific antibody secreted at the mucosal surface, comprising a natural interferon α as the active ingredient of said mucosal adjuvant and wherein nasal mucosal administration of said mucosal adjuvant is performed at the same time as a vaccine antigen, wherein said vaccine antigen comprises a protein or peptide antigen.
8. (Canceled)
9. (Original) The mucosal adjuvant according to claim 7, wherein the amount of the interferon α used is 0.5 to 5,000,000 IU.
10. (Canceled)
- 11.-12. (Canceled)
13. (Previously presented) A combined product of a vaccine antigen and mucosal adjuvant for inducing both vaccine antigen-specific antibody in blood and vaccine antigen-specific antibody secreted at the mucosal surface, wherein said mucosal adjuvant comprises a natural interferon α as the active ingredient and nasal administration of said mucosal adjuvant is performed at the same time as said vaccine antigen, wherein said vaccine antigen comprises a protein or peptide antigen.
14. (Canceled)

15. (Original) The combined product according to claim 13, wherein the amount of the interferon α used is 0.5 to 5,000,000 IU.

16.-18. (Canceled)

19. (Previously presented) A mucosal adjuvant for inducing both vaccine antigen-specific antibody in blood and vaccine antigen-specific antibody secreted at the mucosal surface, wherein said mucosal adjuvant comprises a natural interferon α as the active ingredient and wherein said vaccine antigen comprises a protein or peptide antigen.

20. (Canceled)

21. (Withdrawn) A mucosal immune response activation method, comprising administration of mucosal adjuvant containing interferon α as the active ingredient at the same time as or at a different time than the vaccine antigen and by the same administration route as the vaccine antigen to subjects in whom it is necessary to augment immunity by inducing both vaccine antigen-specific antibody in blood and vaccine antigen-specific antibody secreted at the mucosal surface.

22. (Withdrawn) A method of inducing both vaccine antigen-specific antibody in blood and vaccine antigen-specific antibody secreted at the mucosal surface using vaccine antigen and adjuvant of this vaccine antigen, comprising

- (1) mucosal administration of vaccine antigen,
- (2) the use of an interferon α as the active ingredient of the adjuvant,
- (3) administration of said adjuvant at the same time as or at a different time than said vaccine antigen, and
- (4) mucosal administration of said adjuvant by the same administration route as said vaccine antigen.

23. (Withdrawn) The method according to claim 22, wherein the interferon α is selected from natural interferons α and recombinant interferons α .

24. (Withdrawn) The method according to claim 23, wherein the amount of interferon α used is 0.5 to 5,000,000 IU.

25. (Withdrawn) The method according to claim 23, wherein the vaccine antigen is protein or peptide antigen.

26. (Withdrawn) The method according to claim 23, wherein mucosal administration is performed at the same time.

27. (Withdrawn) The method according to claim 26, wherein administration is via the nasal mucous membrane.

28.-30. (Canceled)

31. (Previously presented) The mucosal adjuvant according to claim 7, wherein the vaccine antigen-specific antibody is secreted at the gastrointestinal mucosal surface.

32. (Previously presented) The mucosal adjuvant according to claim 7, wherein the antibody in blood is IgG.

33. (Previously presented) The mucosal adjuvant according to claim 7, wherein the antibody secreted at the mucosal surface is IgA.

34. (Previously presented) The combined product according to claim 13, wherein the vaccine antigen-specific antibody is secreted at the gastrointestinal mucosal surface.

35. (Previously presented) The combined product according to claim 13, wherein the antibody in blood is IgG.

36. (Previously presented) The combined product according to claim 13, wherein the antibody secreted at the mucosal surface is IgA.

37. (Previously presented) The mucosal adjuvant according to claim 19, wherein the vaccine antigen-specific antibody is secreted at the gastrointestinal mucosal surface.

38. (Previously presented) The mucosal adjuvant according to claim 19, wherein the antibody in blood is IgG.

39. (Previously presented) The mucosal adjuvant according to claim 19, wherein the antibody secreted at the mucosal surface is IgA.

40. (New) The mucosal adjuvant according to claim 19, wherein the ratio of vaccine antigen is 0.01 to 55% w/w of the entire composition.

41. (New) The mucosal adjuvant according to claim 19, wherein the ratio of interferon α is 0.01 to 5% w/w of the entire composition.

42. (New) The mucosal adjuvant according to claim 19, wherein said mucosal adjuvant is encapsulated in a member selected from the group consisting of a liposome, a nanosphere, a microsphere, a biodegradable carrier and a mucoadhesive carrier.

43. (New) The mucosal adjuvant according to claim 42, wherein said biodegradable carrier is polymeric PLGA.

44. (New) The mucosal adjuvant according to claim 42, wherein said mucoadhesive carrier is a mucoadhesive microspheres.